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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,351	02/07/2002	Frederic F. Simard	08890973US	7422

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CANADA

EXAMINER
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KIM, DAVID S

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/067,351

Applicant(s)

SIMARD ET AL.

Examiner

David S. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07 February 2002</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following limitations must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

In **claims 3-4**, the “apparatus” and all of the “means for” are missing from the drawings. That is, the use of the terms “apparatus” and “means for” suggests physical components. The figures do not show such physical components, thus the figures do not show an “apparatus” nor do they show any “means for”.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

2. **Claims 4 and 6** is objected to because of the following informalities:

Claims 4 and 6 do not end with periods.

In the preamble of claim 6, “wherein the raw power adjustment correction factor computed by including:” is used where -- wherein the raw power adjustment correction factor is computed by including: -- or -- wherein the processing portion for computing the raw power adjustment correction factor further includes: -- may be intended.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 5** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Notice the following language:

“A storage medium readable by a computer encoding a computer process to provide a variable clamp equalization method”

In one reading, the ***storage medium*** *encodes* the computer process. However, it is known that storage medium does not generally perform any “encoding” function. Additionally, Applicant’s specification does not provide any teaching about how a storage medium encodes any computer process. Accordingly, without further disclosure addressing this limitation, one of ordinary skill in the art would not be enabled to make and/or use this invention.

On the other hand, it is generally known that a computer process may be encoded onto a storage medium. As a simple remedy, this rejection may be overcome by changing the claim language so that the computer process is encoded onto the storage medium.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 5-6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 5** is a “storage medium” claim. Notice the following language:

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“A storage medium readable by a computer encoding a computer process to provide a variable clamp equalization method, the computer process comprising: ...”

In one reading, the **computer** *encodes* the computer process. Under this reading, claim 5 simply claims a storage medium that is readable by this computer. That is, the body of the claim provides further limitations about the **computer process**, and this **computer process** is encoded by the **computer**. However, these limitations about the **computer process** and the **computer** do not further limit the **storage medium**. Accordingly, this claim language raises the issue of whether or not the body of the claim actually limits the **storage medium** or is even related to the **storage medium**. For example, this claim language may lead one to wonder if Applicant is claiming the storage medium, the computer, or the computer process. It seems that Applicant intended to limit this **storage medium**, but this issue renders this claim indefinite. As a simple remedy, this rejection may be overcome by changing the preamble so that the body of the claim limits the storage medium.

Additionally, **claim 6** is a “method” claim. Notice the following language:

“The method according to claim 5, wherein the raw power adjustment correction factor computed by including: ...”

However, according to the language of claim 5, the “raw power adjustment correction factor” is not part of the **method** of claim 5. Rather, it is part of the **computer process** of claim 5. Accordingly, antecedent basis is lacking, which renders this claim indefinite. As a simple remedy, this rejection may be overcome by changing the preamble so that there is consistency with storage medium claim 5.

#### ***Allowable Subject Matter***

7. **Claims 1-4** are allowed.
8. **Claims 5-6** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
9. The following is an examiner’s statement of reasons for allowance:

Although variable clamp equalization methods are known, Applicant’s particular variable clamp equalization method is novel and non-obvious over the prior art of record. In particular, notice Fig. 11 of Nakajima et al.  $X_{opt}$  and  $(1-X_{opt})$  can be viewed as clamps of a variable clamp schedule (different values

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of X in Fig. 9). However, the sizes of Applicant's clamps are correlated to the sizes of computed OSNR range values. In contrast, the sizes of Nakajima's clamps are correlated to the average values of Q factors. Additionally, Examiner observes that Applicant's variable clamp equalization method appears to have similarities to classical proportional-integral-derivative (PID) control techniques, which are extremely well known throughout the wide field of control methods. However, no applicable prior art was discovered in Examiner's search.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Iwata et al. is cited to show teachings for controlling the power value for each wavelength of a WDM signal (Fig. 5). Nakajima et al. is cited to show teachings for cited to show teachings for an equalization process (Fig. 11) that is quite similar to Applicant's equalization process, except for correlating the clamp size to the size of a computed OSNR range value. Morikawa et al. is also cited to show teachings for an equalization process (Figs. 11-13) that is quite similar to Applicant's equalization process, except for express disclosure of a variable clamp and the process of multiplying a computed raw power adjustment value by a computed raw power adjustment correction factor. Shimokawa et al. is cited to show teachings for using OSNR values of different wavelengths in a BER or Q-value equalization process. Uda et al. is cited to show teachings for using OSNR values of different wavelengths in an equalization process (Fig. 12).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 571-272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth N. Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DSK



**KENNETH VANDERPUYE**  
**SUPERVISORY PATENT EXAMINER**